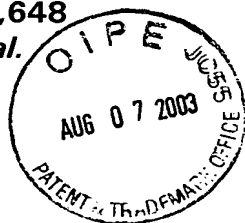


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IN THE CLAIMS:

AMENDMENTS TO THE CLAIMS:

Please amend claims 32, 82, 106, 108 and 109, and add claims 111 and 112 as follows in the claim listing. This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-31 (canceled)

Claim 32. (currently amended) A method for producing a transgenic non-human mammal, comprising:

introducing a cell comprising a satellite artificial chromosome into a female non-human mammal, wherein the cell develops ~~is capable of developing~~ into an embryo in a female non-human mammal; and

allowing the ~~cell~~ embryo to develop into a transgenic non-human mammal comprising a satellite artificial chromosome.

Claims 33-34 (canceled)

Claim 35. (previously presented) The method of claim 32, wherein the satellite artificial chromosome comprises heterologous DNA that encodes a therapeutic product.

Claims 36-37 (canceled)

Claim 38. (previously presented) The method of claim 32, wherein the cell contains the satellite artificial chromosome in a pronucleus.

Claim 39. (previously presented) The method of claim 32, wherein the cell is a zygote.

Claims 40-64 (canceled)

Claim 65. (previously presented) The method of claim 32, wherein the cell is a fertilized ovum.

Claims 66 (canceled)

Claim 67. (previously presented) The method of claim 32, wherein the satellite artificial chromosome is a megachromosome derived from a cell line having

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all of the identifying characteristics of the cell line deposited under ECACC accession number 96040928 or 96040929.

Claims 68-81 (canceled)

Claim 82. (currently amended) A method of producing a transgenic embryo, comprising:

introducing a satellite artificial chromosome into a cell, wherein the cell is ~~capable of developing~~ develops in culture into an embryo; and

culturing the cell under conditions whereby it develops into an embryo.

Claim 83. (previously presented) The method of claim 82, wherein the cell comprises a fertilized oocyte, an ovum, a fertilized ovum or a zygote.

Claims 84-86 (canceled)

Claim 87. (previously presented) The method of claim 82, wherein the cell is a mouse embryonic stem cell.

Claims 88-96 (canceled)

Claim 97. (previously presented) A method for producing a transgenic non-human mammal, comprising:

introducing an embryo comprising a satellite artificial chromosome into a female non-human mammal; and

allowing the embryo to develop into a transgenic non-human mammal comprising a satellite artificial chromosome.

Claim 98. (previously presented) A method for producing a transgenic non-human mammal, comprising:

introducing a fertilized oocyte comprising a satellite artificial chromosome into a female non-human mammal; and

allowing the resulting embryo to develop into a transgenic non-human mammal comprising a satellite artificial chromosome.

Claim 99. (previously presented) A method for producing a transgenic non-human mammal, comprising:

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introducing a mouse embryonic stem cell comprising a satellite artificial chromosome into an embryo;

introducing the embryo into a female non-human mammal; and

allowing the embryo to develop into a transgenic non-human mammal comprising a satellite artificial chromosome.

Claim 100. (previously presented) The method of claim 32, wherein the cell is a mouse cell.

Claims 101-105 (canceled)

Claim 106. (currently amended) A method[[,]] for producing a transgenic non-human mammal, comprising:

introducing an ovum comprising a satellite artificial chromosome (SATAC) into a female non-human mammal, wherein the ovum develops into a zygote or embryo; and

allowing the embryo or zygote to develop into a transgenic non-human animal comprising the SATAC.

Claim 107. (previously presented) The method of claim 106, wherein the satellite artificial chromosome is a megachromosome derived from a cell line having all of the identifying characteristics of the cell line deposited under ECACC accession number 96040928 or 96040929.

Claim 108. (previously presented) The method of claim 32, wherein the cell is an ovum that develops into an embryo or zygote.

Claim 109. (currently amended) The method of claim 97, wherein the embryo is produced by introducing a SATAC into a cell that ~~is capable of developing~~ develops into an embryo, wherein introduction is effected by a method selected from the group consisting of direct uptake, incubation with polyethylene glycol (PEG), lipofection, microinjection, cell fusion, microcell fusion, electroporation, electrofusion, particle bombardment, projectile bombardment, calcium phosphate precipitation and site-specific targeting.

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Claim 110. (previously presented) The method of claim 109, wherein the cell is selected from the group consisting of an ovum, a zygote, a mouse embryonic stem cell and a fertilized oocyte.

Claim 111. (new) The method of claim 32, wherein the embryo and the female non-human mammal are of the same species.

Claim 112. (new) The method of claim 97, wherein the embryo and the female non-human mammal are of the same species.